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# A Bibiometric Analysis of H. J. Eysenck's Research Output: Clarifying Controversy

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#### Abstract

We present a bibliometric analysis of a large corpus of research work by H. J. Eysenck (1916-1997), who was one of the most famous and productive psychologists of the 20<sup>th</sup> century. It utilizes new bibliometric methods to update an analysis of Rushton (2001), examining how articles cluster in terms of themes and co-authors. We present our analysis in the light of a recent investigation by King's College London, which concluded that a number of Eysenck's papers are 'unsafe' and they recommended that journal editors should consider their retraction. We enquire about the relationship between these personality and fatal disease papers and the wider body of Eysenck's work. Our analysis revealed that these papers stand apart from his many other seminal contributions to psychological knowledge; and, even if they were all retracted, this would have little impact on the main corpus of his work. Clearly his work occurs in cluster topics with associated different groups of same co-authors. Our analysis and presentation shines a new light on the contribution of Britain's most productive, but sometimes controversial, psychologist.

#### 1. Introduction

Hans Eysenck was Britain's most prolific writer and researcher in psychology. Over the course of 50 years, he produced a large and influential body of work that helped shape modern-day scientific and professional psychology (see Corr, 2016a). Like all prominent scientists, he had his admirers and detractors. This is evident in the various books written about him (Buchanan, 2010; Gibson, 1981); and it is also clear from his own autobiography which appeared in more than one edition (Eysenck, 1997). In addition, his work attracted large edited volumes (e.g. Modgil & Modgil, 1986; Nyborg, 1997) which serve to showcase the enormous breadth of his work. There have also been other reflections on his life and work (Revelle & Oehlberg, 2008), entries in Encyclopedias (e.g., Mcloughlin, 2002), and even observations by his son, Michael (M. Eysenck, 2011, 2013).

Eysenck was notable for the quality, quantity and range of his research interests and unusually large number of publications. Starting as a PhD student during WWII to the year of his death, a stream of papers appeared on topics as diverse as astrology and criminology (for the full range, see Corr, 2016b). Eysenck was both an experimental and correlational psychologist and strongly advocated that good research required both approaches.

Several years after Eysenck died, Rushton (2001) published a scientometric review of Eysenck's work, where he stated:

"According to Eysenck's Personal Citation Report from the ISI for 1981-1998, which is a complete inventory of his journal publications during the last 17 years of his life, aged 64-81, there were 625 articles on which he was an author or co-author.

Including articles, book reviews and letters to the editors (but omitting books and chapters in books), these earned a total of 2183 citations. This phenomenal output amounts to 37 items a year and includes 124 papers, eight reviews, six proceedings

papers, 16 notes, 384 book reviews, and 56 letters to the editor. Fifty-eight of the publications were those on which Eysenck was not the primary author and they accumulated 1080 citations (49% of the total)...." (p. 26)

By any count, this is a remarkable level of research activity, and contributed to ensure that Eysenck was the most cited living psychologist of his day and the third most cited psychologist of all time (Haggbloom et al., 2002). Such an enduring legacy makes it pertinent to continue to examine and evaluate his contributions. In his article celebrating Eysenck's intellectual legacy, Rushton (2001) extensively used citation scores. Applying new bibliometric software tools, we can examine this body of work in more detail, and thereby offer new and deeper insights into the nature and structure of Eysenck's research achievements.

Eysenck is best remembered for his contribution to personality research; however, his work in many other fields achieved varying levels of success, and sometimes ridicule (e.g., parapsychology and astrology). Drawing on a bibliometric coupling analysis of his published journal articles, available through ISI Web of Science (WoS), we identify clusters of articles representing both the development of his research into personality over time, and other fields to which he contributed.

While Eysenck's research into personality traits and genetics are well discussed (Rushton, 2001), his work on personality in relation to smoking, cancer and cardiovascular disease have received less attention in terms citation analysis. This is an important issue given the controversy that surrounds the truly remarkable and, to some people, unbelievable results (discussed by Corr, 2016b). In this specific field as well as others, there are different ways of viewing this aspect of Eysenck's work. Some see it as a scientific embarrassment, even a 'scandal' (Pelosi, 2019), while others prefer to see it as evidence of a researcher unafraid of

venturing into ever-new fields. With a large number of successes, a few misses are only to be expected – some might even applaud them as the inevitable outcome of an adventurous scientific. Indeed, studies on creativity and innovation recognize the value of large numbers of ideas as a starting point for generating valuable innovations (Boeddrich, 2004) - factors including the willingness to take risks, divergent thinking and the ability to define problems, are associated with higher creativity (Ma, 2009). When a body of work includes both success and misses, the extent and implications of the misses should be examined and dealt with accordingly.

Although a majority of Eysenck's articles are single authored, and a large number written with his wife, Sybil, it is worth nothing he had a large network of collaborators, numbering 122 in the sample examined in this article. As noted by Rushton (2001), this included PhD students in the department he founded and headed; however, it is not limited to them, and his network of collaborators evolved over lifetime – many of the people who worked with Eysenck or knew very well his work and style of working contributed to a special issue to celebrate the centenary of his birth (see Corr, 2016c). A co-authorship analysis offers a visual representation of such collaboration, showing both the groups who worked with him, and how they changed over the years. Such a set of collaborators is consistent with research on creativity (Uzzi & Spiro, 2005), which shows that the most successful creative teams include a stable core and renewal/new perspectives. Eysenck was a master of this approach, working with experts in field he entered and impacted – although others accused him of being something of a gadfly, entering new fields but never quite mastering them (see Corr, 2016b).

This bibliometric study uses the latest methodology to investigate the research legacy of a famous, yet controversial, psychologist. As a result of his prolific research and broad range of interests, Eysenck's body of work is an interesting case study that may help

illuminate some of the issues surrounding research and researchers whose ideas are catalysts for whole new areas of science. Specifically, we conducted a bibliometric coupling analysis of his published journal articles, to identify the different areas of his research, and the extent they overlap or are independent. A second analysis, co-authorship analysis, showed the range of collaborators he had through his career, and how they to a large extent are restricted to a specific topic, as identified in the coupling analysis.

## 1.1. New Light on an Old Controversy

Over the past decade, the field of social psychology experienced a series of shocks, as previously celebrated researchers like Diederik Stapel were exposed for forging data (Levelt, Drenth, & Noort, 2012). Questions were raised about the validity of the analysis and methods behind influential studies, such as the "Power Pose" (Simmons & Simonsohn, 2017). These shocks had several ramifications. As a positive development, more attention is now given to robust methodology, terms such as "HARKing" and "p-hacking" are commonplace, and an increasing number of journals require pre-registration of studies to help focus on the quality of methods, with the promise to publish regardless of findings. Furthermore, a replication movement has emerged, where collections of labs are re-examining central studies in an attempt to identify generally accepted effects which are neither statistical artifacts nor heavily contextually dependent – quite aside from outright fraud. These consequences and developments represent important advances for the field.

All of this should be seen in the context of the different types of work needed to advance science. One is creative studies that open up new perspectives and opportunities, going where others have not yet gone. Such studies need to gain traction, but they need to be examined in detail, refined or refuted: this is a second type of work. A third type of work is

that of replication to distinguish statistical artifacts from robust new findings. The needs of each type of work are different.

Replication requires access to large datasets and rigorous attention to methods.

Refining, refuting or advancing an idea, requires an ability to explore boundary conditions, explanatory mechanisms and seeing broader contexts. Creative and innovative new ideas requires taking risks, proposing ideas where there is little groundwork, established measures or procedures. With risk, there can be large rewards, but also grand failures. How we respond to such research, and researchers, may impact the rate of development.

In the context of Eysenck's scientific output, this is a relevant topic especially when seen against the background of doubt cast on the veridicality of papers that Eysenck co-authored. In 2019, 26 of his papers (all coauthored with Grossarth-Maticek) were "considered unsafe" by an enquiry by King's College London. It is an important issue because at the time of his death, Eysenck was the living psychologist most frequently cited in the peer-reviewed scientific journal literature (Haggbloom et al., 2002; Rushton, 2001). He was also the controversial, for example being cited as the most controversial of 55 intelligence researchers (Carl & Woodley of Menie, 2019). Eysenck's Google Scholar index at the beginning of 2020 was over 114,000, with an H Statistic of 140, and rising – there is evidence of over 40 publications receiving citations of more than 1,000. (There may be some inaccuracies in this analysis because of some confusion with his wife, S.B. Eysenck, and his son, M. Eysenck, but there is no doubt whatsoever that Eysenck was one of the most influential psychologists of the 20th century and still quoted extensively over nearly 25 years after his death.)

A bibliometric analysis can help to clarify this debate, and this is the main purpose of this paper. Our analysis examines whether the 'unsafe' body of Eysenck's research poisons the well of the whole corpus of his work, or whether it stands apart and is something of a latecareer aberration. In addition, we offer a visualization of the extent of the troubled articles.

#### 2. Method

Bibliometric analysis methods enable the quantitative evaluation of a body of published articles, text and citation data. The methods applied in this study are bibliometric coupling and co-authorship analyses, in order to identify the structure of Eysenck's body of research and to identify the ties that form the structure of his collaborations. The bibliometric coupling results show how articles cluster based on the similarity of reference lists, which are subsequently mapped visually (van Eck & Waltman, 2010). Science mapping using bibliometric methods requires several distinct steps namely compiling a corpus of articles, cleaning and analyzing the data, and visualizing and interpreting the results (Zupic & Čater, 2015). In addition to science mapping, we employ social network analysis to further analyze the resulting bibliometric network graphs. The bibliographic data for this study are collected from *The Social Sciences Citation Index* (SSCI), available online through the *Web of Science* (WoS).

## 2.1. Search Strategy

In WoS we used the author search for "HJ Eysenck", and "H Eysenck" which returned 1,240 results. Of these, 402 were journal articles and review studies, which are included in the bibliometric analysis. The remaining entries include book reviews (628), letters (107), notes (33), meeting abstracts (30), and editorial material (23) and duplicates (7) which are excluded from further analyses.

The methods employed in the VOSviewer 1.6.11 software (Waltman, van Eck, & Noyons, 2010) are generally seen to represent best practice in the science mapping literature (Lee, Felps, & Baruch, 2014). This software was used to extract key-terms, estimate clusters and visually map the results. Microsoft Excel was used to clean the data, by identifying authors

whose name varies in the entries, and calculate the cluster interaction scores. The Gephi 0.9.2 software was used to estimate the centrality measure.

## 2.2. Analytical strategy

Bibliographic coupling analysis is used to examine the reference lists of documents in the corpus, identifying where two or more articles share a common reference. The degree of overlap between article's reference list represent the strength of connection between them (Kessler, 1963). Greater overlap means two documents share a large proportion of references, and thus a probability that the content are on related topics. Conversely, little overlap indicates the documents are based on distinct literatures, with few commonalities. We constructed a two-dimensional map using VOSviewer, which determined the layout using a unified framework for mapping and clustering (van Eck & Waltman, 2011). The terms are mapped so that the distance between them indicate their relatedness, and are grouped in clusters, indicating a common theme. The size of the circle indicates the number of citations the article has received in the WoS database. Articles without a reference list, or that has no references in common with other articles, are not placed in a cluster. This was the case for 24 articles in our corpus, largely consisting short articles of a single, or only a few pages.

As citations are necessarily retrospective, newer articles have a wider range of possible sources to cite, consequentially, articles on the same topic will tend to cluster more closely with other articles on the same topic from the same time period, than they will with articles from different time periods. When applying the method to a corpus that spans more than 5 decades, as is the case in this study, a topic that receives continued attention over a long period will likely be spread over several clusters, as the underlying research newer articles are based on, expands.

**Co-author analysis** (Acedo, Barroso, Casanueva, & Galán, 2006) is used to identify a network of researchers, by creating a link between co-authors of each article in the corpus.

When aggregated, the more frequently two authors have collaborated, the stronger the link. Further, the date of each co-authorship is noted, and the average year of collaboration is reported. As the current corpus consists of Eysenck's body of published articles, his name occurs in all the articles and is consequently excluded from the analysis - a common practice for this type of network analysis (Perry, Pescosolido, & Borgatti, 2018).

The network measure eigenvector centrality (hereafter referred to as 'centrality') is a measure of the importance of a given node in a network diagram, calculated by the range and importance of other connecting nodes (Bonacich, 1972). The measure is used to rank the items in each of the network clusters. Further, to evaluate the extent of overlap between clusters in the bibliometric coupling analysis, we examine the ties of the articles in each cluster and calculate the proportion of the ties that go to articles in the same cluster, and those that go to other clusters. A low score indicates there are very few references in common between the clusters, while a high indicates a high degree of commonality. As such it represents a measure of how closely related the clusters are.

#### 3. Results

In this section we show the structure of Eysenck's published articles, identified by the bibliometric coupling analysis, and the structure and extent of his collaboration, in a co-authorship analysis.

#### 3.1. Bibliometric coupling

The results of the bibliometric coupling analysis are shown in two network diagrams. Figure 1a shows how the articles were assigned to clusters, identified by different colours. Figure 1b shows the publication year of each article, where the colour scale indicates the year of publication on a sliding scale. The full list of articles in each cluster, with associated metrics, are presented in Appendix A1. The proportion of links within and between the clusters, indicating degree of similarity, is presented in Table 1.

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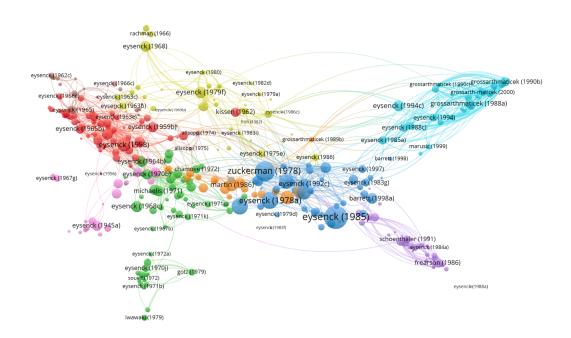
We identified ten clusters, where five relate to Eysenck's evolving work on personality, cluster 9 (Pink) represents his early work, where the average publication year was 1954, followed by the cluster 1 (Red) (avg. publication year 1961), the cluster 2 (Green) (avg. publication year 1971), cluster 7 (Orange) (avg. publication year 1977) and the cluster 3 (Blue) (avg. publication year 1985). A visual inspection of the network graph, shows that his work on personality in the late 1960s and early 1970s, shown in cluster 2, is divided into two parts, one covering his mainstream personality research, while the other, his work on personality and aesthetics. Cluster 7 (Orange) include much of his work on the genetic perspective on personality, and how hereditary it is. These five clusters are heavily interlinked, where between 76% and 89% of all the links in each cluster, link either within the same cluster, or one of the other four, indicating a high degree of similarity.

Cluster 8 (Brown), represents his work on motivation and learning, where the average publication year is 1968 and cluster 4 (Yellow) his work on behavior therapy and psychotherapy. Cluster 5 (Purple) on personality and intelligence has 68% of all its links within the cluster, indicating a high degree of independence. Cluster 6 (Teal), on personality as it relates to cancer and coronary heart disease, has a very high degree of independence, as 81% of all links are within the cluster. As shown visually on the network diagram, it indicates the topics are based on separate literatures than his main body of work on personality. All articles identified by the King's Collage London enquiry (King's College London, 2019) are in cluster 6. To indicate their relation to the rest of the corpus, we show these in figure 1c, where the identified articles are marked in grey. Though not shown, the majority of the other articles in this cluster appear in the list of scientific contributions Marks (2019) recommend for further investigation (it should be noted that allocation to a cluster is algorithmically decided, and some articles may have been assigned to one, rather than another cluster by small margins). For further evidence of the extent clusters 5 and 6 are based on separate

literatures, we have included a co-citation analysis in Appendix B, with the same result. There is a final cluster, consisting of three articles on anesthetics and personality, which is not included in the map, as they do not share sufficient common references with the rest of the articles.

Figure 1a

Network Visualization of the Bibliometric Coupling Analysis of HJ Eysenck's Published Articles – Clustered by Topic.



Note. Size of the circle shows the relative number of citations, the proximity between circles indicate similarity, as gauged by how many references they share and the weight of the line indicates the number of shared references (set minimum to 3 for clarity). Cluster 9 (pink); early work on personality, cluster 1 (Red) dimensions of personality, cluster 2 (Green) Personality, children and aesthetics, cluster 7 (Orange) personality and genetics, cluster 3 (Blue) structure and dimensions of personality, cluster 8 (Brown) motivation and learning, cluster 4 (Yellow) behavior therapy and psychotherapy, cluster 5 (Purple) personality and intelligence, cluster 6 (Teal) on personality as it relates to cancer and coronary heart disease.

Figure 1b

Network Visualization of the Bibliometric Coupling Analysis of HJ Eysenck's Published Articles – by Publication Year.

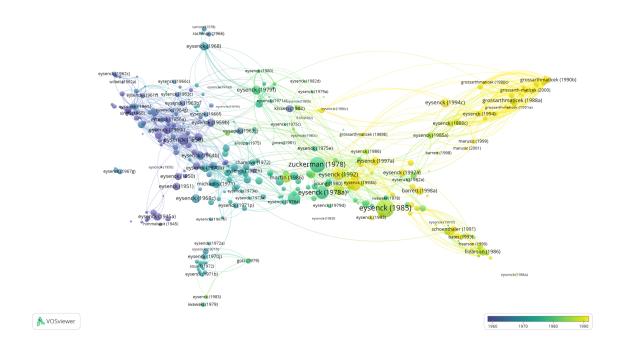
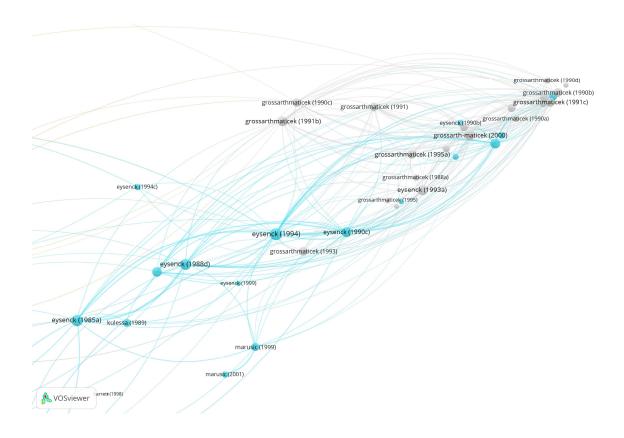


Figure 1b: Network visualization of the bibliometric coupling analysis of HJ Eysenck's published articles. Size of the circle shows the relative number of citations, the proximity between circles indicate similarity, as gauged by how many references they share and the weight of the line indicates the number of shared references (set minimum to 3 for clarity). Colour scale indicates year of publication of each article.

**Figure 1c**An Enlarged and Modified Section of Figure 1a,



An enlarged and modified section of figure 1a, where 20 of the manuscripts identified by the King's College London enquiry are marked in grey (Erratum and notes identified in the enquiry are not part of the study corpus, thus not in the network map).

Table 1

The Proportion of Ties Within and Between the Bibliometric Coupling Clusters

From \ To cluster	To C1	To C2	To C3	To C4	To C5	To C6	To C7	To C8	То С9	To C10	Proportion of all ties
From C1	0.67	0.08	0.04	0.07	0.00	0.01	0.03	0.05	0.04	0.00	0.24
From C2	0.17	0.52	0.13	0.06	0.01	0.01	0.03	0.04	0.03	0.00	0.11
From C3	0.06	0.08	0.55	0.07	0.07	0.07	0.05	0.02	0.02	0.00	0.19
From C4	0.16	0.07	0.14	0.49	0.02	0.04	0.02	0.04	0.02	0.00	0.10
From C5	0.02	0.01	0.17	0.03	0.68	0.03	0.04	0.01	0.02	0.00	0.08
From C6	0.02	0.01	0.10	0.03	0.01	0.81	0.02	0.00	0.00	0.00	0.14
From C7	0.16	0.06	0.20	0.04	0.06	0.06	0.38	0.01	0.03	0.00	0.05
From C8	0.25	0.10	0.09	0.09	0.01	0.01	0.01	0.43	0.02	0.00	0.05
From C9	0.34	0.09	0.11	0.05	0.04	0.01	0.05	0.03	0.29	0.00	0.03
From C10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00

Note: (Colours refer to those in figure 1) C9 (pink); early work on personality, C1 (Red) dimensions of personality, C2 (Green) Personality, children and aesthetics, C7 (Orange) personality and genetics, C3 (Blue) structure and dimensions of personality, C8 (Brown) motivation and learning, C4 (Yellow) behavior therapy and psychotherapy, C5 (Purple) personality and intelligence, C6 (Teal) on personality as it relates to cancer and coronary heart disease. The proportion of ties from each cluster that is shared with other clusters. The diagonal shows the proportion of links within a cluster. The proportion of all ties column refers to how many of all ties in the network, are the cluster.

# 3.2. Co-authorship analysis

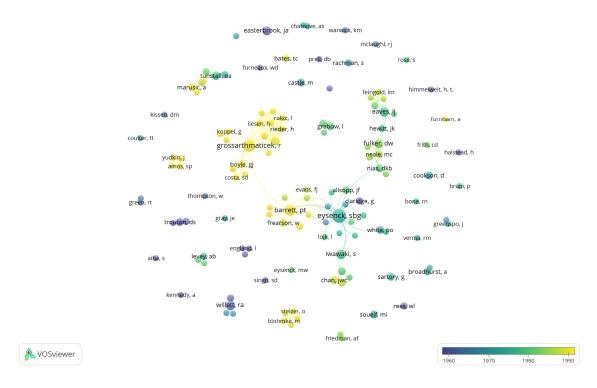
In addition to being prolific, Eysenck worked with a range of other scholars through his career. In our sample, he co-authored articles with 129 other scholars, both as part of teams and in dyadic relationships (see Figure 2). There are a few scholars with whom he collaborated extensively, including his wife, SBG Eysenck, and Paul Barrett, his onetime research assistant. It is clear he also published nearly 30 papers with Grossarth-Maticek. However, with the vast majority of his collaborators, he only penned one or two articles, with a constant renewal of collaborators over time.

A second point to note, is that examining the co-authorships in relation to the bibliometric coupling clusters discussed above, we see there is relatively little overlap between the clusters, indicating that collaborations tended to be on a topic or an idea, while with others he was inspired into new areas, such as aesthetics, intelligence and health. We

have organized the list of co-authors by the clusters identified in the coupling analysis, and list them by number of collaborations, and average year of co-authorship, in Table 2.

Figure 2

Co-Authorship Network Graph of Authors who Collaborated with H J Eysenck



Note. Size of circle indicate number of articles the author co-authored HJ Eysenck. Colour scale shows average publication year of the collaborated works. Ties between authors indicate the co-authors who worked together on the Eysenck articles.

Table 2

Eysenck's Co-Authors, Organized by Clusters Identified in the Bibliometric Coupling Analysis.

	Author contributed to articles in more	Number of articles by	Avg. publication year for full
Charter 9 (Pink) Early make a series of the	than one cluster	author	collaborations
Cluster 9 (Pink): Early work on personality			
Author			
EYSENCK, SBG	X	3	1974
FURNEAUX, WD		1	1945
HALSTEAD, H		1	1945
HIMMELWEIT, HT		1	1945
MCLAUGHL.RJ		1	1966
PRELL, DB		1	1951
REES, WL		2	1945
Cluster 1 (Red): Dimensions of personality			
Author			
AIBA, S		1	1957
CASEY, S		1	1957
CLARIDGE, G		2	1961
EASTERBROOK, JA		5	1960
ENGLAND, L		1	1960
EYSENCK, SBG	X	5	1974
HOLLAND, H		2	1957
KENNEDY, A		1	1952
KISSEN, DM		1	1962
LEVEY, AB	X	1	1974
MAXWELL, AE		1	1961
SINGH, SD		1	1960
SLATER, P	X	1	1960
TARRANT, M		1	1960
TROUTON, DS		3	1957
WARWICK, KM		1	1963
WHITE, PO	X	1	1973
WILLETT, RA	х	1	1963
WOOLF, M		1	1960

Cluster 8 (Brown): Motivation and le	earning		
Author			
ALLSOPP, JF	X	2	1980
BROADHURST, A		2	1973
GRAY, JE		1	1971
ISELER, A		1	1969
SARTORY, GE	X	1	1975
SLATER, P	X	1	1960
STAR, K		1	1969
THOMPSON, W		1	1966
TUNSTALL, OA		4	1977
WILLETT, RA	X	5	1963
WILSON, GD		2	1972
Cluster 2 (Green): Personality and cl	hildren; Aesthetics		
Author			
BORISY, AR		1	1979
CASTLE, M		3	1970
CHAMOVE, AS		1	1972
CHAN JWC	X	1	1987
COOKSON, D		3	1969
EASTING, G		1	1970
EYSENCK, SBG	X	23	1974
GOTZ, KO		3	1979
HARLOW, HF		1	1972
IWAWAKI, S	X	3	1977
LYNN, R	X	1	1987
MICHAELIS, W		1	1971
NIAS, DKB	X	1	1980
RACHMAN, S	X	1	1970
RUSSELL, T		1	1970
RUST, J		1	1977
SHAW, L		1	1974
SOUEIF, MI		3	1972
SYED, IA		1	1966
VERMA, RM		1	1973
WHITE, PO	X	1	1973

Cluster 4 (Yellow): Behaviour therapy and	l psychotherapy		
Author			
FRITH, CD		1	1982
FULKER, DW	X	1	1983
GREENSPO.J		1	1969
HEWITT, JK	X	1	1978
JONES, J		1	1981
LEVEY, AB	X	1	1974
MARTIN, I		1	1981
RACHMAN, S	X	1	1970
SARTORY, GE	X	2	1975
SIMKINS, L		1	1969
Cluster 7 (Orange): Personality and geneti	ics		
Author			
ADELAJA, O		1	1977
BLIZARD, RA		1	1984
BRUNI, P		1	1976
COULTER, TT		1	1972
EAVES, LJ		7	1978
EYSENCK, SBG	X	1	1974
FEINGOLD, LM		1	1986
FULKER, DW	X	1	1983
GREEN, RT		1	1962
GROSSARTH-MATICEK, R	X	1	1991
НЕАТН, АС		1	1986
HEWITT, JK	X	1	1978
JARDINE, R		1	1986
MARTIN, NG		2	1982
NEALE, MC		2	1985
NIAS, DKB	X	1	1980
RUSHTON, JP		2	1985
STACEY, BG		1	1962
VETTER, H	X	1	1989
YOUNG, PA		1	1980
Cluster 10 (No Colour): Anesthetics and p	ersonality		
Author			
GRABOW, L		3	1980
SCHUBERT, F		1	1980
PYHEL, N		3	1980

Cluster 3 (Blue): The structure and dimensions of	personality		
Author			
ALLSOPP, JF	X	1	1980
BARRETT, PT	x	6	1992
COX, DN		1	1982
EVANS, FJ		1	1986
EYSENCK, MW		1	1980
EYSENCK, SBG	x	14	1974
FULKER, DW	X	2	1983
FURNHAM, A		1	1993
HANIN, Y		1	1991
HUMPHERY, N		1	1980
IWAWAKI, S	X	4	1977
LOJK, L		1	1979
MAYO, J		1	1978
NIAS, DKB	x	1	1980
PETRIDES, KV		2	1998
SPIELBERGER, C		1	1986
WHITE, PO	x	1	1973
ZUCKERMAN, M		1	1978
Cluster 5 (Purple): Personality and intelligence			
Author			
AMOS, SP		1	1991
BARRETT, PT	x	8	1992
BATES, TC		2	1993
CHAN JWC	x	2	1987
EYSENCK, SBG	x	1	1974
FREARSON, W		3	1988
FRIEDMAN, AF		1	1983
KLINE, P		1	1996
LUCKING, S		1	1986
LYNN, R	X	2	1987
PALTIEL, L		1	1996
PERITZ, E		1	1991
SCHOENTHALER, SJ		1	1991
WAKEFIELD, JA		1	1983
YUDKIN, J		1	1991

Cluster 6 (Teal): Personality, cancer and	d Coronary heart disease		
Author			
BARRETT, PT	X	1	1992
BLOHMKE, M		1	1989
BOYLE, GJ		2	1998
COOPER, CL		1	1989
COSTA, SD		1	2000
DIEL, IJ		1	2000
FREESEMANN, C		1	1990
FRENTZELBEYME, R		1	1991
GALLASCH, G		2	1991
GROSSARTH-MATICEK, R	X	21	1991
GUDJONSSON, GH		3	1988
HEEB, J		1	2000
JAGSCHITZ, P		1	1989
KANAZIR, DT		1	1990
KOPPEL, G		1	1997
KULESSA, CHE		1	1989
LIESEN, H		1	1990
MARUSIC, A		2	2000
PFEIFER, A		1	1997
RAKIC, L		2	1990
RIEDER, H		2	1990
SCHMIDT, P		1	1997
STARC, R		1	1999
STELZER, O		1	1989
UHLENBRUCK, G		1	1990
VETTER, H	X	4	1989

Note: Authors who appear in two or more clusters are indicated, and the number of publications in each cluster listed. The average year of publication for each collaborator refers to all articles they published with HJ Eysenck, across all clusters.

## 4. Discussion

In the examination of any scientist who works over several decades, it is clear that interest and research in topics waxes and wanes, and this occurs for many reasons such as technical advancements, funding opportunities, and having answered initial questions posed. Some people are more "focused" than others working within the same sub-discipline (e.g. cognitive psychology) and using the same methodology (e.g. experimental methods). Others,

seem to have interests and research in very broad and even unrelated areas as a function of their enquiring mind and personality.

Hans Eysenck was famous for the breadth of his interests which changed over time and which can be seen by examining the articles presented in Appendix A. Critics of this style talk of "flighty", "whimsical" and "shallow", suggesting a lack of sustained and concentrated effort. Others talk of "renaissance man", "big picture" and "polymath". This analysis shows Eysenck to be someone who dipped into, dabbled with, but also made a serious scientific contribution to many different areas of psychology. He read widely in a number of languages and academic disciplines. In short, he scored very highly on "Openness-to Experience".

Further, because so much of scientific research is collaborative, personal friendships and relationships can have a dramatic influence on the topic, quality and quantity of research. Some research dyads thrive on the concept of complementarity: the one prefers study design, the other execution; the one writing up his study while the other prefers the analysis. Many researchers publish over time with the PhD students and research assistants and colleagues. As people "come and go" so relationships and co-authorships ebb and flow. Eysenck published with his wife over most of his academic life, but with other colleagues for a much shorter period of time. Changes in technology, especially the internet, means it is commonplace to research and write papers with people at geographically dispersed sites, indeed in different countries – this was much less easy during Eysenck's lifetime.

What lessons can we draw from Eysenck's body of work? His contribution to the field of psychology can hardly be overstated. He provided new and creative insights; he extended many of them through a wealth of studies; and he encouraged replication, also across countries and cultures. His work benefitted and probably grew in range, as a result of working with a wide range of collaborators. The result of the constant renewal of co-investigators, helped foster fresh thinking and progress.

However, we also see that when all three of the approaches to scientific development, namely creative innovation, extension and replication, are pursued by the same person, it may be easy to fall in love with one's own novel idea and be blinded in the pursuit to confirm it. This may consequently be at the expense of methodological rigor – perhaps leading to a lack of proper scrutiny of the data provided by Grossarth-Maticek. While this issue is yet not resolved, there is some recent evidence to lend support to some of their claims (Whitfield, Landers, Martin, & Boyle, 2020), the proximity in the bibliometric coupling analysis of many of the articles identified by Marks (2019) to those deemed "unsafe" by the enquiry at King's Collage London (2019) adds further support for the call to examine more of Eysenck's work, for this period of time and areas of study.

We also see that when a study, or set of studies are discredited, so is the researcher. Such an accusation may hold back a novel idea, as few, if any, researchers are likely to pick up and examine further a discredited idea. Thus, while it may be tempting to be careless with data when ideas are novel and methods to examine them are not well defined, the consequence of doing so are likely to also be the same idea's death knell.

Towards the end of his life, Eysenck wrote the article "Why Do Scientists cheat?" (1999), where he lays out the case for why some great scientists, including Newton, Freud and his own mentor, Burt, may have cheated in their scientific reporting, in order to promote creative, new ideas that were not well received by the establishment. "Fraud is always bad, particularly in science. Can and should genius be forgiven because creativity is often persecuted? This is an ethical problem, and ethical problems are by definition insoluble – there are good arguments on both sides." (Eysenck, 1999, p. 33-34 – it was published some two years after his death). While this may have been the case in earlier times, we believe this no longer can be viewed as an ethical problem. With the state of science today, with the

methods available, the innumerable outlets and opportunities for replication, there is no excuse for any shortcuts, regardless of the believed value held by the offending scientist.

#### 5. Limitations and conclusion

Although bibliometric analyses can organize and yield both robust and valid results on a corpus of articles, there are limitations that should be acknowledged. First, as the analysis is based on reference lists, date of publication, authorship and other bibliographic data, rather than the content of each article, the method is not a substitute for extensive reading. Careful analysis of individual articles are needed to evalute their contribution, quality and to distinguish between empirical and conceptual articles.

There are also several limitations to this study, some caused by the chosen design and by the use of the bibliometric method, others by the implementation. A limitation of all bibliometric studies stem from the nature of the analysis, where all data are treated equally. For example, there is a tendency of scientists to cite themselves, friends, colleagues and the same sources they are familiar with over a range of articles (Cole & Cole, 1974), resulting in articles seeming more similar than they in reality are, when analyzing references lists, which may in our case have influenced the bibliometric coupling results. As Eysenck was an author of all the papers, this effect may be compounded in our study.

A second set of weaknesses stems from the data, the selected corpus of articles. First, the corpus is a sample, rather than the full population of Eysenck's body of published articles. The reason for this is that not all his articles are available from databases that offer the bibliographic data needed; this is especially true for older articles, and those published in niche outlets. Further, errors in the database records occur. However, the sample is estimated to be sufficient for the analysis to be valid (Burt, 1983).

We do not believe that these limitation negatively impact the conclusions we have drawn on the basis of the most recent methods of bibliometric analysis.

In conclusion, we have shown by bibliometric analysis the specific themes of Eysenck's prolific research and his collaborations with many researchers around the globe. His output was truly amazing, yet some of it has come under recent attack for reporting what some claim are unbelievable results. For this reason, many of his papers in the personality and health psychology field have been declared 'unsafe' and flagged by journals as such. However, this body of work is very small in relationship with the bulk of his outputs over a span of 50 years. We have shown in our bibliometric analysis, whatever the fate of his work declared 'unsafe', this sits separately from his other work and, as such, it cannot be claimed that they poison the well of overall body of research Eysenck's work.

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# Supplementary materials to:

# A Bibiometric Analysis of H. J. Eysenck's Research Output: Clarifying Controversy

Appendix A: Full table of bibliometric coupling analysis.

Table 1

Eysenck's Articles Organized by Clusters Identified by Bibliometric Coupling Analysis, Ranked by Centrality

Cluster 9 (Pink): Early work on personality					
Average Year of publication: 1954	Number of articles in cluster :22	Propos	rtion of all ar	ticles: 6%	
Title	Author	Year	Citations	Centrality	
INTELLIGENCE ASSESSMENT - THEORETICAL AND EXPERIMENTAL APPROACH	EYSENCK, HJ	1967	119	0.97	
ON UNITARY NATURE OF EXTRAVERSION	EYSENCK, HJ; EYSENCK, SBG	1967	35	0.71	
THE ORGANIZATION OF PERSONALITY	EYSENCK, HJ	1951	26	0.47	
PERSONALITY	Eysenck, HJ	1952	11	0.45	
THE INHERITANCE OF NEUROTICISM - AN EXPERIMENTAL STUDY	EYSENCK, HJ; PRELL, DB	1951	105	0.39	
CYCLOTHYMIA AND SCHIZOTHYMIA AS A DIMENSION OF PERSONALITY .1. HISTORICAL REVIEW	EYSENCK, HJ	1950	14	0.38	
THE MEASUREMENT OF PERSONALITY	EYSENCK, HJ	1946	5	0.33	
ASSESSMENT OF PERSONALITY	EYSENCK, HJ	1949	1	0.33	
SCHIZOTHYMIA-CYCLOTHYMIA AS A DIMENSION OF PERSONALITY .2. EXPERIMENTAL	EYSENCK, HJ	1952	88	0.33	
CRITERION ANALYSIS - AN APPLICATION OF THE HYPOTHETICO-DEDUCTIVE METHOD TO FACTOR ANALYSIS	EYSENCK, HJ	1950	85	0.32	
PSYCHOLOGY OF THE SCIENTIST .64. PROMINENCE VERSUS PERSONALITY	EYSENCK, HJ	1980	2	0.30	
THE MEMORY FUNCTION .1. A FACTORIAL STUDY OF 15 CLINICAL TESTS	EYSENCK, HJ; HALSTEAD, H	1945	33	0.07	
SALIVARY RESPONSE TO LEMON JUICE AS A MEASURE OF INTROVERSION	EYSENCK, SBG; EYSENCK, HJ	1967	36	0.07	
VISUAL MASKING AS A FUNCTION OF PERSONALITY	MCLAUGHL.RJ; EYSENCK, HJ	1966	2	0.07	
A FACTORIAL STUDY OF SOME MORPHOLOGICAL AND PSYCHOLOGICAL ASPECTS OF HUMAN CONSTITUTION	REES, WL; EYSENCK, HJ	1945	48	0.06	
PRIMARY AND SECONDARY SUGGESTIBILITY - AN EXPERIMENTAL AND STATISTICAL STUDY	EYSENCK, HJ; FURNEAUX, WD	1945	120	0.06	
A COMPARATIVE STUDY OF 4 SCREENING TESTS FOR NEUROTICS	EYSENCK, HJ	1945	12	0.03	
AN EXPERIMENTAL ANALYSIS OF THE MOSAIC PROJECTION TEST	Himmelweit, HT; Eysenck, HJ	1945	11	0.02	
PHYSIOLOGICAL REACTIVITY TO SENSORY STIMULATION AS A MEASURE OF PERSONALITY	EYSENCK, SBG; EYSENCK, HJ	1967	30	0.01	
STATES OF HEIGHTENED SUGGESTIBILITY - NARCOSIS	EYSENCK, HJ; REES, WL	1945	23	0.01	

EYSENCK, HJ	1947	4	0.00
EYSENCK, HJ	1948	2	0.00
1)		•	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
		J	l
Number of articles in cluster :72	Proportion of all articles: 189		
Author	Year	Citations	Centrality
EYSENCK, HJ	1983	21	1.00
EYSENCK, HJ	1971	12	0.93
EYSENCK, HJ	1966	2	0.86
EYSENCK, HJ	1960	19	0.84
EYSENCK, HJ; CLARIDGE, G	1962	38	0.81
EYSENCK, HJ	1961	11	0.78
EYSENCK, HJ	1959	129	0.77
EYSENCK, HJ; TARRANT, M; WOOLF, M; ENGLAND, L	1960	132	0.74
EYSENCK, HJ	1961	53	0.73
EYSENCK, HJ	1960	10	0.73
EYSENCK, SBG; EYSENCK, HJ; CLARIDGE, G	1960	10	0.71
EYSENCK, HJ	1964	0	0.69
EYSENCK, HJ	1955	127	0.68
EYSENCK, HJ	1963	18	0.67
EYSENCK, HJ	1960	22	0.66
EYSENCK, SBG; EYSENCK, HJ	1962	7	0.65
EYSENCK, SBG; EYSENCK, HJ	1963	45	0.65
EYSENCK, HJ	1959	15	0.64
EYSENCK, HJ	1959	0	0.64
EYSENCK, HJ	1956	62	0.64
EYSENCK, HJ	1964	19	0.64
EYSENCK, HJ	1959	6	0.63
EYSENCK, HJ	1958	3	0.62
EYSENCK, HJ	1962	30	0.61
	EYSENCK, HJ  Number of articles in cluster:72  Author  EYSENCK, HJ  EYSENCK, HJ	EYSENCK, HJ   1948   1959	EYSENCK, HJ

BIOLOGICAL BASIS OF PERSONALITY	EYSENCK, HJ	1963	59	0.59
PERSONALITY AND THE MEASUREMENT OF INTELLIGENCE	EYSENCK, HJ; WHITE, PO	1964	32	0.58
CONDITIONING, INTROVERSION - EXTRAVERSION AND STRENGTH OF NERVOUS SYSTEM	EYSENCK, HJ; LEVEY, A	1967	8	0.57
FACTORIAL STUDY OF PSYCHOTICISM AS A DIMENSION OF PERSNALITY	EYSENCK, HJ; EYSENCK, SBG	1968	8	0.57
A SHORT QUESTIONNAIRE FOR THE MEASUREMENT OF 2 DIMENSIONS OF PERSONALITY	EYSENCK, HJ	1958	283	0.57
PERSONALITY AND REMINISCENCE - AN EXPERIMENTAL STUDY OF THE REACTIVE INHIBITION AND THE CONDITIONED INHIBITION THEORIES	EYSENCK, HJ	1964	16	0.57
REMINISCENCE AS A FUNCTION OF DRIVE	EYSENCK, HJ; MAXWELL, AE	1961	30	0.56
THE NATURE OF ANXIETY AND THE FACTORIAL METHOD	EYSENCK, HJ	1958	4	0.56
INVOLUNTARY REST PAUSES IN TAPPING AS A FUNCTION OF DRIVE AND PERSONALITY	EYSENCK, HJ	1964	29	0.55
SCIENTIFIC METHODOLOGY AND THE DYNAMICS OF ANXIETY AND HYSTERIA	EYSENCK, HJ	1959	1	0.55
MEASUREMENT OF MOTIVATION THROUGH USE OF OBJECTIVE INDEXES	EYSENCK, HJ; WILLETT, RA	1961	19	0.52
A NOTE ON IMPULSE REPRESSION AND EMOTIONAL ADJUSTMENT	EYSENCK, HJ	1961	0	0.52
CLINICAL PROBLEMS AND EXPERIMENTAL RESEARCHES - A REPLY	EYSENCK, HJ	1958	0	0.52
THE INHERITANCE OF EXTRAVERSION- INTROVERSION	EYSENCK, HJ	1956	73	0.51
CONDITIONING AND PERSONALITY	EYSENCK, HJ	1962	30	0.51
EFFECTS OF PRACTICE AND REST ON FLUCTUATIONS IN THE MULLER-LYER-ILLUSION	EYSENCK, HJ; SLATER, P	1958	32	0.50
A FACTORIAL STUDY OF AN INTERVIEW- QUESTIONNAIRE	EYSENCK, HJ; EYSENCK, SBG	1962	12	0.50
SOME RECENT CRITICISM OF THE DIMENSIONAL ANALYSIS OF PERSONALITY	EYSENCK, HJ	1959	1	0.49
THE EFFECTS OF SMOKING ON THE CFF THRESHOLD	WARWICK, KM; EYSENCK, HJ	1963	21	0.49
DRUGS AND PERSONALITY .3. THE EFFECTS OF STIMULANT AND DEPRESSANT DRUGS ON VISUAL AFTEREFFECTS	EYSENCK, HJ; HOLLAND, H; TROUTON, DS	1957	41	0.48
SMOKING, PERSONALITY AND PSYCHOSOMATIC- DISORDERS	EYSENCK, HJ	1963	71	0.48
PERSONALITY-FACTORS IN CONDITIONING - AN INTRODUCTORY NOTE TO 2 PAPERS	EYSENCK, HJ	1965	1	0.48
DRUGS AND PERSONALITY .9. THE EFFECTS OF STIMULANT AND DEPRESSANT DRUGS UPON VISUAL FIGURAL AFTEREFFECTS	EYSENCK, HJ; EASTERBROOK, JA	1960	10	0.48
COMMENTS ON A TEST OF THE PERSONALITY- SATIATION-INHIBITION THEORY	EYSENCK, HJ	1959	6	0.47
PERSONALITY AND PROBLEM-SOLVING	EYSENCK, HJ	1959	19	0.47
PERSONALITY AND VERBAL-CONDITIONING	EYSENCK, HJ	1959	23	0.47
SERIAL POSITION EFFECTS IN NONSENSE SYLLABLE LEARNING AS A FUNCTION OF INTERLIST REST PAUSES	EYSENCK, HJ	1959	5	0.46
DRUGS AND PERSONALITY .2. THE EFFECT OF STIMULANT AND DEPRESSANT DRUGS ON CONTINUOUS WORK	EYSENCK, HJ; CASEY, S; TROUTON, DS	1957	40	0.45
DRUGS AND PERSONALITY .10. THE EFFECTS OF STIMULANT AND DEPRESSANT DRUGS UPON KINAESTHETIC FIGURAL AFTEREFFECTS	EYSENCK, HJ; EASTERBROOK, JA	1960	9	0.45

DRUGS AND PERSONALITY .6. THE EFFECTS OF STIMULANT AND DEPRESSANT DRUGS UPON BODY SWAY (STATIC ATAXIA)	EYSENCK, HJ; EASTERBROOK, JA	1960	17	0.45
DRUGS AND PERSONALITY .5. THE EFFECTS OF STIMULANT AND DEPRESSANT DRUGS ON THE SUPPRESSION OF THE PRIMARY VISUAL STIMULUS	EYSENCK, HJ; AIBA, S	1957	19	0.45
PERSONALITY AND EXPERIMENTAL PSYCHOLOGY	EYSENCK, HJ	1966	37	0.45
CONDITIONED EMOTIONAL RESPONSE IN THE RAT .3. DRUG-ANTAGONISM	SINGH, SD; EYSENCK, HJ	1960	16	0.45
DRUGS AND PERSONALITY .1. THEORY AND METHODOLOGY	EYSENCK, HJ	1957	92	0.44
THE PSYCHOLOGIST AS TECHNICIAN	EYSENCK, HJ; KENNEDY, A	1952	2	0.28
DRUGS AND PERSONALITY .11. THE EFFECTS OF STIMULANT AND DEPRESSANT DRUGS UPON AUDITORY FLUTTER FUSION	EYSENCK, HJ; EASTERBROOK, JA	1960	4	0.26
THE SCIENCE OF PERSONALITY - NOMOTHETIC	EYSENCK, HJ	1954	37	0.25
ANIMALS OR HUMANS - SOME PROBLEMS OF COMPARATIVE PSYCHOLOGY	EYSENCK, HJ	1962	0	0.21
WARM-UP IN PURSUIT ROTOR LEARNING AS A FUNCTION OF THE EXTINCTION OF CONDITIONED INHIBITION	EYSENCK, HJ	1956	28	0.20
DRUGS AND PERSONALITY .8. THE EFFECTS OF STIMULANT AND DEPRESSANT DRUGS ON VISUAL AFTEREFFECTS OF A ROTATING SPIRAL	EYSENCK, HJ; EASTERBROOK, JA	1960	10	0.16
PERSONALITY IN MALE LUNG-CANCER PATIENTS	KISSEN, DM; EYSENCK, HJ	1962	109	0.11
A REPLY TO MCPHERSONS COMMENTS ON ABERDEEN CONDITIONING STUDIES	EYSENCK, HJ	1966	0	0.10
DRUGS AND PERSONALITY .4. THE EFFECTS OF STIMULANT AND DEPRESSANT DRUGS ON THE RATE OF FLUCTUATION OF A REVERSIBLE PERSPECTIVE FIGURE	EYSENCK, HJ; HOLLAND, H; TROUTON, DS	1957	21	0.09
FIGURAL AFTEREFFECTS, PERSONALITY, AND INTER-SENSORY COMPARISONS	EYSENCK, HJ	1962	6	0.09
COMMENTS ON DR SUTHERLAND'S ADDRESS FROM THE CHAIR II. RESEARCH IN MEDICAL PSYCHOLOGY: A COMMENT	Eysenck, HJ	1953	1	0.08
DIAGNOSIS AND MEASUREMENT - A REPLY TO LOEVINGER	EYSENCK, HJ	1956	1	0.06
A NOTE ON SOME CRITICISMS OF THE MOWRER EYSENCK CONDITIONING THEORY OF CONSCIENCE	EYSENCK, HJ	1965	2	0.06

Average Year of publication: 1968	Number of articles in cluster :22	Propoi	ticles: 6%	
Title	Author	Year	Citations	Centrality
PERSONALITY AND LEARNING	EYSENCK, HJ	1973	3	0.88
A 3-FACTOR THEORY OF REMINISCENCE	EYSENCK, HJ	1965	78	0.60
AN EXPERIMENTAL TEST OF THE INHIBITION AND CONSOLIDATION THEORIES OF REMINISCENCE	EYSENCK, HJ	1964	21	0.58
PERFORMANCE AND REMINISCENCE ON PURSUIT ROTOR AND MIRROR DRAWING TASKS IN DEPENCENCE ON ACTIVATION, PAUSE LENGTH AND PERSONALITY VAARIABLES	EYSENCK, HJ; SARTORY, GE	1971	2	0.55
EXTRAVERSION, NEUROTICISM, AND VERBAL REASONING ABILITY AS DETERMINANTS OF PAIRED-ASSOCIATES LEARNING	ALLSOPP, JF; EYSENCK, HJ	1975	4	0.54

INVOLUNTARY REST PAUSES (IRPS) IN SCHIZOPHRENICS AND NORMALS	BROADHURST, A; EYSENCK, JJ	1973	0	0.52
PERSONALITY AS A DETERMINANT OF PAIRED- ASSOCIATES LEARNING	ALLSOPP, JF; EYSENCK, HJ	1974	13	0.52
PURSUIT ROTOR REMINISCENCE IN SCHIZOPHRENICS AND NORMALS	BROADHURST, A; EYSENCK, HJ	1973	1	0.51
POST-REST UPSWING AND DOWNSWING IN PURSUIT ROTOR LEARNING AFTER DISTRIBUTED PRACTICE AS A FUNCTION OF LENGTH OF PRACTICE	EYSENCK, HJ; ISELER, A; STAR, K; WILLETT, RA	1969	1	0.25
MEASUREMENT OF MOTIVATION IN PREDICTING INDUSTRIAL PERFORMANCE - STUDY OF APPRENTICE GAS FITTERS	WILSON, GD; TUNSTALL, OA; EYSENCK, HJ	1972	10	0.18
INDIVIDUAL DIFFERENCES IN TAPPING PERFORMANCE AS A FUNCTION OF TIME ON TASK	WILSON, GD; TUNSTALL, OA; EYSENCK, HJ	1971	10	0.18
REMINISCENCE AND SHAPE OF LEARNING CURVE AS A FUNCTION OF SUBJECTS ABILITY LEVEL ON PURSUIT ROTOR	EYSENCK, HJ; GRAY, JE	1971	1	0.17
AN EXPERIMENTAL STUDY OF HUMAN MOTIVATION	WILLETT, RA; EYSENCK, HJ	1962	7	0.14
MEASUREMENT OF MOTIVATION	EYSENCK, HJ	1963	6	0.11
EFFECT OF DRIVE ON PERFORMANCE AND REMINISCENCE IN A COMPLEX TRACING TASK	EYSENCK, HJ; WILLETT, RA	1966	2	0.11
EXPERIMENTALLY INDUCED DRIVE AND DIFFICULTY LEVEL IN SERIAL ROTE LEARNING	WILLETT, RA; EYSENCK, HJ	1962	5	0.10
A NEW THEORY OF POST-REST UPSWING OR WARM-UP IN MOTOR LEARNING	EYSENCK, HJ	1969	1	0.09
CUE UTILIZATION AS A FUNCTION OF DRIVE - AN EXPERIMENTAL-STUDY	EYSENCK, HJ; WILLETT, RA	1962	22	0.07
PERFORMANCE AND REMINISCENCE ON A SYMBOL SUBSTITUTION TASK AS A FUNCTION OF DRIVE	EYSENCK, HJ; WILLETT, RA	1962	4	0.06
ON DUAL FUNCTION OF CONSOLIDATION	EYSENCK, HJ	1966	7	0.06
EFFECTS OF DISTRACTION ON PURSUIT ROTOR LEARNING PERFORMANCE AND REMINISCENCE	EYSENCK, HJ; THOMPSON, W	1966	16	0.05
DRIVE, DIRECTION OF ROTATION, AND MASSING OF PRACTICE AS DETERMINANTS OF DURATION OF AFTEREFFECTS FROM ROTATING SPIRAL	EYSENCK, HJ; SLATER, P; WILLETT, RA	1962	10	0.05

# Cluster 2 (Green): Personality and children; Aesthetics

Average Year of publication: 1971	Number of articles in cluster: 59	Proportion of all articles: 15%		
Title	Author	Year	Citations	Centrality
PERSONALITY MEASUREMENT IN CHILDREN - DIMENSIONAL APPROACH	EYSENCK, HJ; EASTING, G; EYSENCK, SBG	1970	11	0.99
PERSONALITY OF FEMALE PRISONERS	EYSENCK, SBG; EYSENCK, HJ	1973	8	0.96
PERSONALITY AND SEXUAL BEHAVIOR	EYSENCK, HJ	1972	36	0.89
SEVERITY AND TYPE OF PSYCHOTIC ILLNESS AS A FUNCTION OF PERSONALITY	VERMA, RM; EYSENCK, HJ	1973	40	0.76
QUESTIONNAIRE MEASUREMENT OF PSYCHOTICISM	EYSENCK, SBG; EYSENCK, HJ	1972	68	0.76
CRIME AND PERSONALITY - EMPIRICAL STUDY OF 3-FACTOR THEORY	EYSENCK, SBG; EYSENCK, HJ	1970	81	0.75
PERSONALITY IN PRIMARY SCHOOL CHILDREN .2. TEACHERS RATINGS	EYSENCK, HJ; COOKSON, D	1969	15	0.61
PERSONALITY IN PRIMARY SCHOOL CHILDREM .1. ABILITY AND ACHIEVEMENT	EYSENCK, HJ; COOKSON, D	1969	80	0.55

CLASSIFICATION OF DEPRESSIVE ILLNESSES	EYSENCK, HJ	1970	128	0.55
PERSONALITY IN MONKEYS - FACTOR-ANALYSES OF RHESUS SOCIAL BEHAVIOR	CHAMOVE, AS; EYSENCK, HJ; HARLOW, HF	1972	64	0.54
PERSONALITY AND SEXUAL ADJUSTMENT	EYSENCK, HJ	1971	82	0.48
AN EXPERIMENTAL INVESTIGATION OF DESIRABILITY RESPONSE SET IN A PERSONALITY QUESTIONNAIRE	EYSENCK, SBG; EYSENCK, HJ	1963	12	0.39
PERSONALITY AND MENTAL-ILLNESS	EYSENCK, SBG; WHITE, O; EYSENCK, HJ	1976	31	0.37
PERSONALITY AND ATTAINMENT - APPLICATION OF PSYCHOLOGICAL PRINCIPLES TO EDUCATIONAL OBJECTIVES	EYSENCK, HJ	1972	16	0.35
NEW VISUAL AESTHETIC SENSITIVITY TEST .1. CONSTRUCTION AND PSYCHOMETRIC PROPERTIES	GOTZ, KO; LYNN, R; BORISY, AR; EYSENCK, HJ	1979	32	0.30
ORTHOGONALITY OF PSYCHOTICISM AND NEUROTICISM - FACTORIAL STUDY	EYSENCK, HJ; EYSENCK, SBG	1971	29	0.30
AN IMPROVED SHORT QUESTIONNAIRE FOR THE MEASUREMENT OF EXTRAVERSION AND NEUROTICISM	EYSENCK, SBG; EYSENCK, HJ	1964	126	0.28
DETERMINATION OF PERSONALITY INVENTORY FACTOR PATTERNS AND INTERCORRELATIONS BY CHANGES IN REAL-LIFE MOTIVATION	MICHAELIS, W; EYSENCK, HJ	1971	141	0.25
MASCULINITY-FEMININITY, PERSONALITY AND SEXUAL ATTITUDES	EYSENCK, HJ	1971	15	0.23
FACTORS INFLUENCING OUTCOME OF PSYCHOTHERAPY	EYSENCK, HJ	1972	2	0.23
EXPERIMENTAL STUDY OF FREUDIAN CONCEPTS	EYSENCK, HJ	1972	15	0.22
MODIFICATION OF PERSONALITY AND LIE SCALE SCORES BY SPECIAL HONESTY INSTRUCTIONS	EYSENCK, SBG; EYSENCK, HJ; SHAW, L	1974	60	0.22
SCORES ON THREE PERSONALITY VARIABLES AS A FUNCTION OF AGE, SEX AND SOCIAL CLASS	EYSENCK, SBG; EYSENCK, HJ	1969	128	0.21
COMPARATIVE STUDY OF CRIMINALS AND MATCHED CONTROLS ON 3 DIMENSIONS OF PERSONALITY	EYSENCK, SBG; EYSENCK, HJ	1971	30	0.20
CRIME AND PERSONALITY - ITEM ANALYSIS OF QUESTIONNAIRE RESPONSES	EYSENCK, SBG; EYSENCK, HJ	1971	35	0.20
MEASUREMENT OF PSYCHOTICISM - A STUDY OF FACTOR STABILITY AND RELIABILITY	EYSENCK, SBG; EYSENCK, HJ	1968	150	0.19
RELATION BETWEEN INTELLIGENCE AND PERSONALITY	EYSENCK, HJ	1971	46	0.19
PERSONALITY AND CLASSIFICATION OF ADULT OFFENDERS	EYSENCK, SBG; RUST, J; EYSENCK, HJ	1977	22	0.16
TEST-RETEST RELIABILITIES OF A NEW PERSONALITY QUESTIONNAIRE FOR CHILDREN	EYSENCK, SBG; EYSENCK, HJ	1973	10	0.16
ATTITUDES TO SEX, PERSONALITY AND LIE SCALE SCORES	EYSENCK, SBG; EYSENCK, HJ	1971	7	0.15
PERSONALITY AND ATTITUDES TO SEX IN CRIMINALS	EYSENCK, HJ	1973	8	0.12
DEVELOPMENT OF AESTHETIC SENSITIVITY IN CHILDREN	EYSENCK, HJ	1972	10	0.12
PERSONALITY-DIFFERENCES BETWEEN PRISONERS AND CONTROLS	EYSENCK, SBG; EYSENCK, HJ	1977	26	0.10
ACQUIESCENCE RESPONSE SET IN PERSONALITY QUESTIONNAIRES	EYSENCK, SBG; EYSENCK, HJ	1963	3	0.10
INTERPRETATION OF CHILDRENS LIE SCALE SCORES	EYSENCK, SBG; NIAS, DKB; EYSENCK, HJ	1971	39	0.10
CRIME AND PERSONALITY RECONSIDERED	EYSENCK, HJ	1974	7	0.06
FACTOR-ANALYTIC STUDY OF MAITLAND GRAVES DESIGN JUDGMENT TEST	EYSENCK, HJ	1967	14	0.06

PERSONAL PREFERENCES, AESTHETIC SENSITIVITY AND PERSONALITY IN TRAINED AND UNTRAINED SUBJECTS	EYSENCK, HJ	1972	25	0.06
TRAINING IN ART AS A FACTOR IN DETERMINATION OF PREFERENCE JUDGEMENTS FOR POLYGONS	EYSENCK, HJ; CASTLE, M	1970	46	0.06
AN EXPERIMENTAL STUDY OF AESTHETIC PREFERENCE FOR POLYGONAL FIGURES	EYSENCK, HJ	1968	43	0.05
EXTRAVERSION, INTELLIGENCE, AND ABILITY TO DRAW A PERSON	EYSENCK, SBG; RUSSELL, T; EYSENCK, HJ	1970	4	0.05
ACQUIESCENCE RESPONSE SET IN PERSONALITY-INVENTORY ITEMS	EYSENCK, SBG; EYSENCK, HJ	1964	4	0.05
CULTURAL RELATIVITY IN AESTHETIC JUDGMENTS - EMPIRICAL STUDY	EYSENCK, HJ; IWAWAKI, S	1971	14	0.04
PREFERENCE JUDGMENTS FOR POLYGONS, DESIGNS, AND DRAWINGS	EYSENCK, HJ	1972	6	0.04
FACTORS IN DETERMINATION OF PREFERENCE JUDGMENTS FOR POLYGONAL FIGURES - COMPARATIVE STUDY	SOUEIF, MI; EYSENCK, HJ	1972	6	0.04
AN APPLICATION OF MAITLAND GRAVES DESIGN JUDGMENT TEST TO PROFESSIONAL ARTISTS	EYSENCK, HJ	1970	10	0.04
PERSONALITY IN PRIMARY SCHOOL CHILDREN .3. FAMILY BACKGROUND	EYSENCK, HJ; COOKSON, D	1970	37	0.04
INTROVERTS, EXTRAVERTS AND SEX	EYSENCK, HJ	1971	3	0.04
PERSONALITY AND RECIDIVISM IN BORSTAL BOYS	EYSENCK, SBG; EYSENCK, HJ	1974	7	0.04
FUTURE OF CLINICAL PSYCHOLOGY	EYSENCK, HJ; RACHMAN, S	1973	1	0.03
DESIRABILITY RESPONSE SET IN CHILDREN	EYSENCK, SBG; SYED, IA; EYSENCK, HJ	1966	10	0.02
EMPIRICAL TEST OF THEORY OF SEXUAL SYMBOLISM	EYSENCK, HJ; SOUEIF, M	1972	5	0.02
FACTOR-ANALYTIC STUDY OF BARRON-WELSH ART SCALE	EYSENCK, HJ; CASTLE, M	1970	15	0.01
A NEW MEASURE OF GOOD-TASTE IN VISUAL ART + THE VISUAL AESTHETIC SENSITIVITY TEST	EYSENCK, HJ	1983	12	0.01
DETERMINATION OF AESTHETIC JUDGMENT BY RACE AND SEX	EYSENCK, HJ; IWAWAKI, S	1975	6	0.01
COMPARATIVE STUDY OF ARTISTS AND NONARTISTS ON MAITLAND GRAVES DESIGN JUDGMENT TEST	EYSENCK, HJ; CASTLE, M	1971	15	0.01
CULTURAL DIFFERENCES IN AESTHETIC PREFERENCES	SOUEIF, MI; EYSENCK, HJ	1971	12	0.01
A NEW VISUAL AESTHETIC SENSITIVITY TEST .3. CROSS-CULTURAL-COMPARISON BETWEEN HONG-KONG CHILDREN AND ADULTS, AND ENGLISH AND JAPANESE SAMPLES	CHAN, J; EYSENCK, HJ; GOTZ, KO	1980	10	0.00
NEW VISUAL AESTHETIC SENSITIVITY TEST (VAST) .2. CROSS-CULTURAL-COMPARISON BETWEEN ENGLAND AND JAPAN	IWAWAKI, S; EYSENCK, HJ; GOTZ, KO	1979	24	0.00

### Cluster 4 (Yellow): Behaviour therapy and psychotherapy

Average Year of publication: 1975	Number of articles in cluster: 48	Proportion of all articles: 12%		
Title	Author	Year	Citations	Centrality
THE SOCIAL APPLICATION OF PAVLOVIAN THEORIES	EYSENCK, HJ	1983	4	0.92
THE CONDITIONING MODEL OF NEUROSIS	EYSENCK, HJ	1979	178	0.73
CAN PERSONALITY STUDY EVER BE SCIENTIFIC	EYSENCK, HJ	1986	34	0.67

LEARNING-THEORY MODEL OF NEUROSIS - NEW APPROACH	EYSENCK, HJ	1976	97	0.64
BEHAVIOR-THERAPY, SPONTANEOUS REMISSION AND TRANSFERENCE IN NEUROTICS	EYSENCK, HJ	1963	28	0.57
BEHAVIOR THERAPY AS A SCIENTIFIC DISCIPLINE	EYSENCK, HJ	1971	10	0.55
META-ANALYSIS - AN ABUSE OF RESEARCH INTEGRATION	EYSENCK, HJ	1984	44	0.54
PERSONALITY AND BEHAVIOUR THERAPY	EYSENCK, HJ	1960	14	0.53
PERSONALITY AND THE TOPOGRAPHY OF THE CONDITIONED EYELID RESPONSE	JONES, J; EYSENCK, HJ; MARTIN, I; LEVEY, AB	1981	9	0.50
EQUALITY AND EDUCATION - FACT AND FICTION	EYSENCK, HJ	1975	1	0.47
FEAR, PAIN, AND AROUSAL	EYSENCK, HJ	1980	1	0.46
WHO NEEDS A RANDOM SAMPLE	EYSENCK, HJ	1975	41	0.44
SKINNER BLIND EYE	EYSENCK, HJ	1984	1	0.44
PRECOGNITION IN RATS	EYSENCK, HJ	1975	4	0.44
PROGRAMME RESEARCH AND TRAINING IN RESEARCH METHODOLOGY	EYSENCK, HJ	1970	0	0.42
THE OUTCOME PROBLEM IN PSYCHOTHERAPY - WHAT HAVE WE LEARNED	EYSENCK, HJ	1994	34	0.40
THE CONDITIONING THEORY OF NEUROSIS - CRITICISMS CONSIDERED	EYSENCK, HJ	1979	1	0.35
BEHAVIOR-THERAPY, EXTINCTION AND RELAPSE IN NEUROSIS	EYSENCK, HJ	1963	45	0.34
FUNCTION AND TRAINING OF THE CLINICAL PSYCHOLOGIST	EYSENCK, HJ	1950	9	0.30
BEHAVIOR-THERAPY AND THE CONDITIONING MODEL OF NEUROSIS	EYSENCK, HJ	1981	9	0.30
THE OUTCOME PROBLEM IN PSYCHOTHERAPY - A REPLY	EYSENCK, HJ	1964	21	0.27
BEHAVIOR THERAPY AND ITS CRITICS	EYSENCK, HJ	1970	21	0.23
NEW WAYS IN PSYCHOTHERAPY	EYSENCK, HJ	1967	8	0.21
EFFECTS OF PSYCHOTHERAPY RECONSIDERED	EYSENCK, HJ	1964	1	0.20
A UNIFIED THEORY OF PSYCHOTHERAPY, BEHAVIOR-THERAPY AND SPONTANEOUS REMISSION	EYSENCK, HJ	1980	9	0.20
PSYCHOTHERAPY AND EXPERIMENTAL APPROACH	EYSENCK, HJ	1973	0	0.18
BEHAVIOR THERAPY IS BEHAVIORISTIC	EYSENCK, HJ	1972	13	0.18
PSYCHOANALYSIS AND BEHAVIOR-THERAPY - THE FREUDIAN ERROR	EYSENCK, HJ	1994	0	0.13
A THEORY OF INCUBATION OF ANXIETY/FEAR RESPONSES	EYSENCK, HJ	1968	131	0.11
BEHAVIOR-THERAPY AND THE PHILOSOPHERS	EYSENCK, HJ	1979	8	0.10
WHY DO CONDITIONED-RESPONSES SHOW INCREMENTATION, WHILE UNCONDITIONED RESPONSES SHOW HABITUATION	EYSENCK, HJ	1982	5	0.09
GREENSPOON AND SIMKINS ON PSYCHOTHERAPY - A REPLY	EYSENCK, HJ; SIMKINS, L; GREENSPO.J	1969	0	0.09
FAILURE OF TREATMENT - FAILURE OF THEORY	EYSENCK, HJ	1986	1	0.08
THE EFFECTIVENESS OF PSYCHOTHERAPY - THE SPECTER AT THE FEAST	EYSENCK, HJ	1983	5	0.07
REPLY TO A CRITIQUE AND REFORMULATION OF BEHAVIOR THERAPY	RACHMAN, S; EYSENCK, HJ	1966	30	0.06
STRAIN DIFFERENCES IN ACQUISITION AND EXTINCTION OF FEAR RESPONSES IN RATS	SARTORY, G; EYSENCK, HJ	1976	13	0.06
CONDITIONING, COGNITION, AND NEUROSIS	EYSENCK, HJ	1980	0	0.05
REMINISCENCE AND LEARNING - ONE OR MANY	FRITH, CD; EYSENCK, HJ	1982	0	0.05
IS BEHAVIOR-THERAPY ON COURSE (REPRINTED)	EYSENCK, HJ	1984	1	0.05
THE EFFECTS OF PSYCHOTHERAPY: AN	EYSENCK, HJ	1952	0	0.04
EVALUATION				

SINGLE-TRIAL CONDITIONING NEUROSIS AND NAPALKOV PHENOMENON	EYSENCK, HJ	1967	28	0.03
TRIUMPH OF AVERAGE	EYSENCK, HJ	1973	0	0.02
ASTROLOGY - SCIENCE OR SUPERSTITION	EYSENCK, HJ	1979	0	0.02
EFFECT OF STRAIN AND LEVEL OF SHOCK ON BEHAVIOR OF RATS IN PSI EXPERIMENTS	HEWITT, JK; FULKER, DW; EYSENCK, HJ	1978	0	0.02
FEAR CONDITIONING AND EXTINCTION IN RATS AT DIFFERENT TIMES OF DAY	SARTORY, G; EYSENCK, HJ	1978	3	0.01
BEHAVIOUR THERAPY V PSYCHOTHERAPY	EYSENCK, HJ	1969	0	0.01
MISH-MASH OF THEORIES	EYSENCK, HJ	1971	3	0.01
RELAPSE AND SYMPTOM SUBSTITUTION AFTER DIFFERENT TYPES OF PSYCHOTHERAPY	EYSENCK, HJ	1969	7	0.00

## Cluster 7 (Orange): Personality and genetics

Average Year of publication: 1977	Number of articles in cluster: 29	Propor	rtion of all ar	ticles: 7%
Title	Author	Year	Citations	Centrality
GENETIC AND ENVIRONMENTAL CONTRIBUTIONS TO INDIVIDUAL-DIFFERENCES - THE 3 MAJOR DIMENSIONS OF PERSONALITY	EYSENCK, HJ	1990	180	0.94
NATURE OF EXTRAVERSION - GENETIC-ANALYSIS	EAVES, L; EYSENCK, H	1975	131	0.58
THE PSYCHOLOGY OF POLITICS - REPLY	EYSENCK, HJ	1956	18	0.48
THE CAUSES AND CURES OF PREJUDICE - AN EMPIRICAL-STUDY OF THE FRUSTRATION AGGRESSION HYPOTHESIS	GROSSARTHMATICEK, R; EYSENCK, HJ; VETTER, H	1989	13	0.39
STRUCTURE OF SOCIAL-ATTITUDES	EYSENCK, HJ	1975	93	0.29
STRUCTURE OF SOCIAL-ATTITUDES AFTER 25 YEARS - REPLICATION	HEWITT, JK; EYSENCK, HJ; EAVES, LJ	1977	5	0.28
ALTRUISM AND AGGRESSION - THE HERITABILITY OF INDIVIDUAL-DIFFERENCES	RUSHTON, JP; FULKER, DW; NEALE, MC; NIAS, DKB; EYSENCK, HJ	1986	296	0.27
COMPARATIVE-STUDY OF PERSONALITY IN NIGERIAN AND ENGLISH SUBJECTS	EYSENCK, SBG; ADELAJA, O; EYSENCK, HJ	1977	22	0.21
TESTING ONE OF RUSHTON PREDICTIONS	EYSENCK, HJ	1989	0	0.21
PERSONALITY, PREMARITAL SEXUAL PERMISSIVENESS, AND ASSORTATIVE MATING	EYSENCK, HJ	1974	17	0.21
GENETICS AND DEVELOPMENT OF SOCIAL- ATTITUDES	EAVES, LJ; EYSENCK, HJ	1974	116	0.20
PERSONALITY AND ATTITUDES OF WORKING- CLASS BRITISH COMMUNISTS AND FASCISTS	EYSENCK, HJ; COULTER, TT	1972	42	0.18
THE MYTH OF THE SHARED ENVIRONMENT	EYSENCK, HJ	1987	0	0.18
SOCIAL ATTITUDES AND SOCIAL CLASS	EYSENCK, HJ	1971	58	0.17
STRUCTURE OF ATTITUDES - ITALIAN SAMPLE	BRUNI, P; EYSENCK, HJ	1976	9	0.17
STRUCTURE OF SOCIAL-ATTITUDES	EYSENCK, HJ	1976	56	0.16
TRANSMISSION OF SOCIAL-ATTITUDES	MARTIN, NG; EAVES, LJ; HEATH, AC; JARDINE, R; FEINGOLD, LM; EYSENCK, HJ	1986	230	0.16
THE PSYCHOLOGY OF POLITICS AND THE PERSONALITY SIMILARITIES BETWEEN FASCISTS AND COMMUNISTS	EYSENCK, HJ	1956	23	0.15
T CONCEPT	GREEN, RT; STACEY, BG; EYSENCK, HG	1962	0	0.14
PSYCHOPATHOLOGY - TYPE OR TRAIT	EYSENCK, HJ	1995	2	0.13
ALTRUISM AND GENETICS	RUSHTON, JP; FULKER, DW; NEALE, MC; BLIZARD, RA; EYSENCK, HJ	1984	17	0.12

INTERGENERATIONAL STABILITY AND CHANGE IN THE CAUSES OF VARIATION IN PERSONALITY	YOUNG, PA; EAVES, LJ; EYSENCK, HJ	1980	42	0.12
PRIMARY SOCIAL ATTITUDES - A COMPARISON OF ATTITUDE PATTERNS IN ENGLAND, GERMANY, AND SWEDEN	EYSENCK, HJ	1953	23	0.12
GENETIC AND ENVIRONMENTAL COMPONENTS OF INCONSISTENCY AND UNREPEATABILITY IN TWINS RESPONSES TO A NEUROTICISM QUESTIONNAIRE	EAVES, L; EYSENCK, H	1976	40	0.11
GENETIC, ENVIRONMENTAL AND PERSONALITY- FACTORS INFLUENCING AGE OF 1ST SEXUAL INTERCOURSE IN TWINS	MARTIN, NG; EAVES, LJ; EYSENCK, HJ	1977	54	0.08
THE COMPARATIVE APPROACH IN PERSONALITY STUDY	EYSENCK, HJ	1984	4	0.04
SOME COMMENTS ON THE GOUGH SOCIALIZATIONS CALE	EYSENCK, HJ	1995	0	0.04

## Cluster 10 (No Colour): Anesthetics and personality

Average Year of publication: 1980	Number of articles in cluster: 3	Proportion of all articles: 1%		
Title	Author	Year	Citations	Centrality
ANALYSIS OF POSTOPERATIVE USE OF OPIATES AND ITS RELATION TO PERSONAL ASSESSMENT	GRABOW, L; SCHUBERT, F; PYHEL, N; EYSENCK, HJ	1980	5	0.00
GENERAL-ANESTHESIA AND VIGILANCE WITH RESPECT TO PERSONAL ASSESSMENT	GRABOW, L; EYSENCK, HJ; PYHEL, N	1980	4	0.00
RELATIONS BETWEEN PATIENTS WITH FUNCTIONAL PAIN AND PERSONAL ASSESSMENT	GRABOW, L; EYSENCK, HJ; PYHEL, N	1980	2	0.00

### Cluster 3 (Blue): The structure and dimensions of personality

Average Year of publication: 1985	Number of articles in cluster: 52	Proportion of all articles: 13%		
Title	Author	Year	Citations	Centrality
DIMENSIONS OF PERSONALITY - 16, 5 OR 3 - CRITERIA FOR A TAXONOMIC PARADIGM	EYSENCK, HJ	1991	389	0.93
SPORT AND PERSONALITY	EYSENCK, HJ; NIAS, DKB; COX, DN	1982	121	0.92
THE DEFINITION AND MEASUREMENT OF PSYCHOTICISM	EYSENCK, HJ	1992	157	0.91
PERSONALITY AND EXPERIMENTAL PSYCHOLOGY: THE UNIFICATION OF PSYCHOLOGY AND THE POSSIBILITY OF A PARADIGM	EYSENCK, HJ	1997	133	0.86
PERSONALITY AS A FUNDAMENTAL CONCEPT IN SCIENTIFIC PSYCHOLOGY	EYSENCK, HJ	1983	20	0.81
IS THERE A PARADIGM IN PERSONALITY- RESEARCH	EYSENCK, HJ	1983	23	0.75
4 WAYS 5 FACTORS ARE NOT BASIC	EYSENCK, HJ	1992	383	0.70
PERSONALITY AND PSYCHOSOMATIC DISEASES	EYSENCK, HJ	1981	19	0.68
CROSS-CULTURAL COMPARISONS OF PERSONALITY DIMENSIONS - ENGLAND AND AMERICA	EYSENCK, SBG; BARRETT, P; SPIELBERGER, C; EVANS, FJ; EYSENCK, HJ	1986	14	0.68
PERSONALITY AND GROUP SEX - EMPIRICAL- STUDY	EYSENCK, HJ	1977	1	0.68
PERSONALITY AND AGING - AN EXPLORATORY ANALYSIS	EYSENCK, HJ	1988	22	0.68
SUPERFACTORS P, E AND N IN A COMPREHENSIVE FACTOR SPACE	EYSENCK, HJ	1978	46	0.66

MISCHEL AND THE CONCEPT OF PERSONALITY	EYSENCK, MW; EYSENCK, HJ	1980	36	0.64
IMPULSIVENESS AND VENTURESOMENESS - THEIR POSITION IN A DIMENSIONAL SYSTEM OF PERSONALITY DESCRIPTION	EYSENCK, SBG; EYSENCK, HJ	1978	579	0.63
JAPANESE AND ENGLISH PERSONALITY STRUCTURE - A CROSS-CULTURAL-STUDY	IWAWAKI, S; FYSENCK, SBG; EYSENCK, HJ	1980	5	0.62
PERSONALITY AND CRIME: WHERE DO WE STAND	EYSENCK, HJ	1996	39	0.56
THE NATURE OF SCHIZOTYPY	EYSENCK, HJ; BARRETT, P	1993	26	0.54
PRIMARIES OR SECOND-ORDER FACTORS - CRITICAL CONSIDERATION OF CATTELLS 16-PF- BATTERY	EYSENCK, HJ	1972	39	0.53
SENSATION SEEKING IN ENGLAND AND AMERICA - CROSS-CULTURAL, AGE, AND SEX COMPARISONS	ZUCKERMAN, M; EYSENCK, S; EYSENCK, HJ	1978	1123	0.48
AN IMPROVEMENT ON PERSONALITY-INVENTORY - A CITATION CLASSIC COMMENTARY ON THE EYSENCK PERSONALITY QUESTIONNAIRE BY EYSENCK,H.J., AND EYSENCK,S.B.G.	EYSENCK, HJ	1990	0	0.47
DIFFERENCES IN PERSONALITY BETWEEN JAPANESE AND ENGLISH	IWAWAKI, S; EYSENCK, SBG; EYSENCK, HJ	1977	40	0.44
PERSONALITY AND THE EXPERIMENTAL STUDY OF EDUCATION	EYSENCK, HJ	1996	31	0.42
PLACE OF IMPULSIVENESS IN A DIMENSIONAL SYSTEM OF PERSONALITY DESCRIPTION	EYSENCK, SBG; EYSENCK, HJ	1977	528	0.41
THE BIOLOGICAL BASIS OF CROSS-CULTURAL DIFFERENCES IN PERSONALITY - BLOOD-GROUP ANTIGENS	EYSENCK, HJ	1982	24	0.39
THE UNIVERSALITY OF TYPOLOGY - A COMPARISON BETWEEN ENGLISH AND JAPANESE SCHOOL-CHILDREN	IWAWAKI, S; EYSENCK, SBG; EYSENCK, HJ	1980	21	0.38
NATIONAL DIFFERENCES IN PERSONALITY - YUGOSLAVIA AND ENGLAND	LOJK, L; EYSENCK, SBG; EYSENCK, HJ	1979	22	0.37
THE STRUCTURE OF PERSONALITY IN AUSTRALIAN AS COMPARED WITH ENGLISH SUBJECTS	EYSENCK, SBG; HUMPHERY, N; EYSENCK, HJ	1980	33	0.37
THE COMPONENTS OF TYPE-A BEHAVIOR AND ITS GENETIC-DETERMINANTS	EYSENCK, H; FULKER, D	1982	1	0.35
THE COMPONENTS OF TYPE-A BEHAVIOR AND ITS GENETIC-DETERMINANTS	EYSENCK, H; FULKER, D	1983	54	0.34
HOW VALID IS THE PSYCHOTICISM SCALE - A COMMENT ON THE KAMPEN, VAN CRITIQUE	EYSENCK, HJ	1995	11	0.34
IMPULSIVENESS AND VENTURESOMENESS IN CHILDREN	EYSENCK, SBG; EYSENCK, HJ	1980	54	0.34
CROSS-CULTURAL COMPARISONS - THE VALIDITY OF ASSESSMENT BY INDEXES OF FACTOR COMPARISON	EYSENCK, HJ	1986	11	0.32
PERSONALITY-FACTORS IN A RANDOM SAMPLE OF THE POPULATION	EYSENCK, HJ	1979	19	0.32
CREATIVITY AND PERSONALITY - WORD- ASSOCIATION, ORIGENCE, AND PSYCHOTICISM	EYSENCK, HJ	1994	49	0.32
PSYCHOTICISM AS A DIMENSION OF PERSONALITY - A REPLY TO KASIELKE	EYSENCK, HJ	1981	3	0.32
A REVISED VERSION OF THE PSYCHOTICISM SCALE	EYSENCK, SBG; EYSENCK, HJ; BARRETT, P	1985	1809	0.31
THE EYSENCK PERSONALITY QUESTIONNAIRE: AN EXAMINATION OF THE FACTORIAL SIMILARITY OF P, E, N, AND L ACROSS 34 COUNTRIES	BARRETT, PT; PETRIDES, KV; EYSENCK, SBG; EYSENCK, HJ	1998	137	0.29
ADDICTION, PERSONALITY AND MOTIVATION	EYSENCK, HJ	1997	50	0.28

P OR A AND C - THE ROLE OF THEORY - REPLY	EYSENCK, HJ	1992	86	0.26
PERSONALITY AND THE BARRON-WELSH ART SCALE	EYSENCK, HJ; FURNHAM, A	1993	31	0.26
COMMENTS ON PERSONALITY AND DELINQUENCY	EYSENCK, HJ	1977	1	0.26
BLOCK AND PSYCHOTICISM	EYSENCK, HJ; EYSENCK, SBG	1977	18	0.25
MACHIAVELLIANISM AS A COMPONENT IN PSYCHOTICISM AND EXTROVERSION	ALLSOPP, J; EYSENCK, HJ; EYSENCK, SBG	1991	48	0.25
THE PLACE OF ANXIETY AND IMPULSIVITY IN A DIMENSIONAL FRAMEWORK	EYSENCK, HJ	1987	17	0.23
NATIONAL DIFFERENCES IN PERSONALITY AS RELATED TO ABO BLOOD-GROUP POLYMORPHISM	EYSENCK, HJ	1977	18	0.23
CASE OF BURT,CYRIL - FRAUD AND PREJUDICE IN A SCIENTIFIC CONTROVERSY	EYSENCK, HJ	1977	2	0.22
A CROSS-CULTURAL-STUDY OF PERSONALITY - RUSSIA AND ENGLAND	HANIN, Y; EYSENCK, SBG; EYSENCK, HJ; BARRETT, P	1991	42	0.19
THE ORTHOGONALITY OF EXTROVERSION AND NEUROTICISM SCALES - COMMENTS	EYSENCK, HJ	1987	1	0.18
EMPIRICAL-STUDY OF RELATION BETWEEN ASTROLOGICAL FACTORS AND PERSONALITY	MAYO, J; WHITE, O; EYSENCK, HJ	1978	37	0.17
SEXUAL ATTITUDES AMONG BRITISH AND JAPANESE STUDENTS	IWAWAKI, S; EYSENCK, HJ	1978	14	0.15
ESTIMATING INSPECTION TIME: RESPONSE PROBABILITIES, THE BRAT IT ALGORITHM, AND IQ CORRELATIONS	BARRETT, PT; PETRIDES, KV; EYSENCK, HJ	1998	7	0.01
RESPONSE TO SOME PRELIMINARY REFLECTIONS ON THE INTERPRETATION OF CORRELATION- COEFFICIENTS	EYSENCK, HJ	1983	0	0.01

### Cluster 5 (Purple): Personality and intelligence

Average Year of publication: 1987	Number of articles in cluster: 37	Propor	Proportion of all articles: 9%		
Title	Author	Year	Citations	Centrality	
INTELLIGENCE, REACTION-TIME AND THE EFFECTS OF SMOKING	FREARSON, W; BARRETT, P; EYSENCK, HJ	1988	34	0.58	
THE BIOSOCIAL NATURE OF MAN	EYSENCK, HJ	1980	4	0.51	
STRING LENGTH, ATTENTION AND INTELLIGENCE - FOCUSED ATTENTION REVERSES THE STRING LENGTH IQ RELATIONSHIP	BATES, T; EYSENCK, HJ	1993	24	0.50	
REACTION-TIME AND INTELLIGENCE - A REPLICATED STUDY	BARRETT, P; EYSENCK, HJ; LUCKING, S	1986	59	0.42	
GENETIC-FACTORS IN BEHAVIOR - THE RETURN OF THE REPRESSED	EYSENCK, HJ	1986	1	0.31	
DIAGNOSIS AND CLINICAL-ASSESSMENT - THE DSM-III	EYSENCK, HJ; WAKEFIELD, JA; FRIEDMAN, AF	1983	60	0.27	
THE RELATIONSHIP BETWEEN EVOKED- POTENTIAL COMPONENT AMPLITUDE, LATENCY, CONTOUR LENGTH, VARIABILITY, ZERO- CROSSINGS, AND PSYCHOMETRIC INTELLIGENCE	BARRETT, PT; EYSENCK, HJ	1994	36	0.24	
NOMOTHETIC AND IDIOGRAPHIC PERSONALITY STUDY REVISITED - A COMMENTARY ON CORSINIS CRITIQUE	EYSENCK, HJ	1987	0	0.23	
SENSORY NERVE-CONDUCTION AND INTELLIGENCE - A REPLICATION	BARRETT, PT; EYSENCK, HJ	1993	5	0.23	

PERSONALITY-DIFFERENCES ACCORDING TO GENDER	EYSENCK, HJ; EYSENCK, SBG; BARRETT, P	1995	4	0.22
CONTROLLED TRIAL OF VITAMIN-MINERAL SUPPLEMENTATION - EFFECTS ON INTELLIGENCE AND PERFORMANCE	SCHOENTHALER, SJ; AMOS, SP; EYSENCK, HJ; PERITZ, E; YUDKIN, J	1991	67	0.22
BRAIN EVOKED-POTENTIALS AND INTELLIGENCE - THE HENDRICKSON PARADIGM	BARRETT, PT; EYSENCK, HJ	1992	29	0.20
INTELLIGENCE - THE NEW LOOK	EYSENCK, HJ	1986	6	0.20
TOWARD A NEW MODEL OF INTELLIGENCE	EYSENCK, HJ	1986	24	0.17
THOMSON BONDS OR SPEARMAN ENERGY - 60 YEARS ON	EYSENCK, HJ	1987	5	0.16
PERSONALITY, MARITAL SATISFACTION, AND DIVORCE	EYSENCK, HJ	1980	26	0.14
INSPECTION TIME AND INTELLIGENCE - A HISTORICAL INTRODUCTION	EYSENCK, HJ	1986	13	0.14
SOCIOBIOLOGY - STANDING ON ONE LEG	EYSENCK, HJ	1980	3	0.12
INTELLIGENCE VERSUS BEHAVIOR	EYSENCK, HJ	1984	4	0.09
RAISING IQ THROUGH VITAMIN AND MINERAL SUPPLEMENTATION - AN INTRODUCTION	EYSENCK, HJ	1991	14	0.08
THE FURNEAUX MODEL OF HUMAN PROBLEM- SOLVING - ITS RELATIONSHIP TO REACTION-TIME AND INTELLIGENCE	FREARSON, W; EYSENCK, HJ; BARRETT, PT	1990	9	0.08
INTELLIGENCE, INSPECTION TIME, AND DECISION TIME	BATES, TC; EYSENCK, HJ	1993	37	0.08
THE SOCIOLOGY OF PSYCHOLOGICAL KNOWLEDGE, THE GENETIC INTERPRETATION OF THE IQ, AND MARXIST-LENINIST IDEOLOGY	EYSENCK, HJ	1982	11	0.08
THE STRUCTURE AND MEASUREMENT OF INTELLIGENCE	EYSENCK, HJ	1981	3	0.08
INTELLIGENCE, REACTION-TIME (RT) AND A NEW ODD-MAN-OUT RT PARADIGM	FREARSON, W; EYSENCK, HJ	1986	89	0.08
EQUALITY AND EDUCATION - 15 YEARS ON	EYSENCK, HJ	1991	0	0.07
THE NATURE OF COGNITIVE DIFFERENCES BETWEEN BLACKS AND WHITES	EYSENCK, HJ	1985	1	0.07
THE SEVERAL MEANINGS OF INTELLIGENCE	EYSENCK, HJ	1987	2	0.07
REACTION-TIMES AND INTELLIGENCE AMONG HONG-KONG CHILDREN	CHAN, JWC; EYSENCK, HJ; LYNN, R	1991	5	0.06
REACTION-TIMES AND INTELLIGENCE IN CHINESE AND BRITISH CHILDREN	LYNN, R; CHAN, JWC; EYSENCK, HJ	1991	19	0.05
BURT,CYRIL AND INHERITANCE OF IQ	EYSENCK, HJ	1978	0	0.04
SCIENCE, RACISM, AND SEXISM	EYSENCK, HJ	1991	1	0.02
AN EVALUATION OF THE PSYCHOMETRIC PROPERTIES OF THE CONCEPT 5.2 OCCUPATIONAL PERSONALITY QUESTIONNAIRE	BARRETT, P; KLINE, P; PALTIEL, L; EYSENCK, HJ	1996	10	0.02
RACE AND INTELLIGENCE AN ALTERNATIVE HYPOTHESIS	EYSENCK, HJ	1991	4	0.01
O-TEMPORA, O-MORES	EYSENCK, HJ	1988	1	0.01
DO SCHOOLS CHEAT MINORITY CHILDREN - COMMENT	EYSENCK, HJ	1972	0	0.01

## Cluster 6 (Teal): Personality, cancer and coronary heart disease

Average Year of publication: 1992	Number of articles in cluster: 36	Proportion of all articles: 9%			
Title	Author	Year	Citations	Centrality	
PERSONALITY, CANCER AND CARDIOVASCULAR- DISEASE - A CAUSAL-ANALYSIS	EYSENCK, HJ	1985	59	0.63	

THE RESPECTIVE IMPORTANCE OF PERSONALITY, CIGARETTE-SMOKING AND INTERACTION EFFECTS FOR THE GENESIS OF CANCER AND CORONARY HEART-DISEASE	EYSENCK, HJ	1988	49	0.61
PERSONALITY, STRESS AND CANCER - PREDICTION AND PROPHYLAXIS	EYSENCK, HJ	1988	68	0.58
CANCER, PERSONALITY AND STRESS - PREDICTION AND PREVENTION	EYSENCK, HJ	1994	57	0.43
PSYCHOSOCIAL PERSONALITY-TRAITS AND CIGARETTE-SMOKING AMONG BRONCHIAL- CARCINOMA PATIENTS	KULESSA, CHE; BLOHMKE, M; JAGSCHITZ, P; STELZER, O; COOPER, CL; EYSENCK, HJ	1989	2	0.35
CREATIVE NOVATION BEHAVIOR-THERAPY AS A PROPHYLACTIC TREATMENT FOR CANCER AND CORONARY HEART-DISEASE .1. DESCRIPTION OF TREATMENT	GROSSARTHMATICEK, R; EYSENCK, HJ	1991	32	0.31
BIOLOGICAL AND PSYCHOSOCIAL RISK FACTORS IN ISCHAEMIC HEART DISEASE: EMPIRICAL FINDINGS AND A BIOPSYCHOSOCIAL MODEL	MARUSIC, A; GUDJONSSON, GH; EYSENCK, HJ; STARC, R	1999	17	0.29
PREDICTION OF CANCER AND CORONARY HEART- DISEASE MORTALITY BY MEANS OF A PERSONALITY-INVENTORY - RESULTS OF A 15- YEAR FOLLOW-UP-STUDY	EYSENCK, HJ	1993	29	0.28
TYPE-A BEHAVIOR AND CORONARY HEART- DISEASE - THE 3RD STAGE	EYSENCK, HJ	1990	24	0.28
PREDICTION OF CANCER AND CORONARY HEART- DISEASE AS A FUNCTION OF METHOD OF QUESTIONNAIRE ADMINISTRATION	GROSSARTHMATICEK, R; EYSENCK, HJ; BARRETT, P	1993	22	0.27
PERSONALITY AS A RISK FACTOR IN CORONARY HEART-DISEASE	EYSENCK, HJ	1991	13	0.22
SYSTEMATIC REVIEWS - METAANALYSIS AND ITS PROBLEMS	EYSENCK, HJ	1994	157	0.19
SYNERGISTIC INTERACTION OF SMOKING AND NEUROTICISM AS A RISK FACTOR IN ISCHAEMIC HEART DISEASE: CASE-CONTROL STUDY	MARUSIC, A; EYSENCK, HJ	2001	7	0.19
PROPHYLACTIC EFFECTS OF PSYCHOANALYSIS ON CANCER-PRONE AND CORONARY HEART DISEASE-PRONE PROBANDS, AS COMPARED WITH CONTROL-GROUPS AND BEHAVIOR-THERAPY GROUPS	GROSSARTHMATICEK, R; EYSENCK, HJ	1990	11	0.18
ANTISMOKING ATTITUDES AND GENERAL PREJUDICE - AN EMPIRICAL-STUDY	GROSSARTHMATICEK, R; EYSENCK, HJ; VETTER, H	1988	1	0.18
COFFEE-DRINKING AND PERSONALITY AS FACTORS IN THE GENESIS OF CANCER AND CORONARY HEART-DISEASE	GROSSARTHMATICEK, R; EYSENCK, HJ	1990	3	0.17
PERSONALITY TYPE, SMOKING HABIT AND THEIR INTERACTION AS PREDICTORS OF CANCER AND CORONARY HEART-DISEASE	GROSSARTHMATICEK, R; EYSENCK, HJ; VETTER, H	1988	84	0.16
ALCOHOL-CONSUMPTION AND HEALTH - SYNERGISTIC INTERACTION WITH PERSONALITY	GROSSARTHMATICEK, R; EYSENCK, HJ; BOYLE, GJ	1995	7	0.16
INTERACTION OF PSYCHOSOCIAL AND PHYSICAL RISK FACTORS IN THE CAUSATION OF MAMMARY CANCER, AND ITS PREVENTION THROUGH PSYCHOLOGICAL METHODS OF TREATMENT	GROSSARTH-MATICEK, R; EYSENCK, HJ; BOYLE, GJ; HEEB, J; COSTA, SD; DIEL, IJ	2000	34	0.15
SELF-REGULATION AND MORTALITY FROM CANCER, CORONARY HEART-DISEASE, AND OTHER CAUSES - A PROSPECTIVE-STUDY	GROSSARTHMATICEK, R; EYSENCK, HJ	1995	36	0.14
CHANGES IN DEGREE OF SCLEROSIS AS A FUNCTION OF PROPHYLACTIC TREATMENT IN CANCER-PRONE AND CHD-PRONE PROBANDS	GROSSARTHMATICEK, R; EYSENCK, H; GALLASCH, G; VETTER, H; FRENTZELBEYME, R	1991	2	0.14

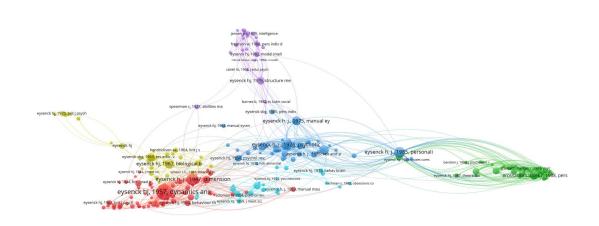
THE SPECIFIC ACTION OF DIFFERENT PERSONALITY RISK FACTORS ON CANCER OF THE BREAST, CERVIX, CORPUS UTERI AND OTHER TYPES OF CANCER: A PROSPECTIVE INVESTIGATION	GROSSARTH-MATICEK, R; EYSENCK, HJ; PFEIFER, A; SCHMIDT, P; KOPPEL, G	1997	7	0.14
THE PREDICTION OF DEATH FROM CANCER BY MEANS OF PERSONALITY STRESS QUESTIONNAIRE - TOO GOOD TO BE TRUE	EYSENCK, HJ	1990	13	0.12
SPORT ACTIVITY AND PERSONALITY AS ELEMENTS IN PREVENTING CANCER AND CORONARY HEART-DISEASE	GROSSARTHMATICEK, R; EYSENCK, HJ; UHLENBRUCK, G; RIEDER, H; VETTER, H; FREESEMANN, C; RAKIC, L; GALLASCH, G; KANAZIR, DT; LIESEN, H	1990	4	0.12
PERSONALITY, STRESS, AND MOTIVATIONAL FACTORS IN DRINKING AS DETERMINANTS OF RISK FOR CANCER AND CORONARY HEART-DISEASE	GROSSARTHMATICEK, R; EYSENCK, HJ	1991	14	0.11
CREATIVE NOVATION BEHAVIOR-THERAPY AS A PROPHYLACTIC TREATMENT FOR CANCER AND CORONARY HEART-DISEASE .2. EFFECTS OF TREATMENT	EYSENCK, HI; GROSSARTHMATICEK, R	1991	36	0.11
WHY DO SCIENTISTS CHEAT?	EYSENCK, HJ	1999	1	0.10
PERSONALITY, STRESS AND DISEASE - DESCRIPTION AND VALIDATION OF A NEW INVENTORY	GROSSARTHMATICEK, R; EYSENCK, HJ	1990	79	0.10
PREVENTION OF CANCER AND CORONARY HEART-DISEASE AND THE REDUCTION IN THE COST OF THE NATIONAL-HEALTH-SERVICE	EYSENCK, HJ; GROSSARTHMATICEK, R	1989	12	0.09
PERSONALITY, SMOKING, AND ALCOHOL AS SYNERGISTIC RISK-FACTORS FOR CANCER OF THE MOUTH AND PHARYNX	GROSSARTHMATICEK, R; EYSENCK, HJ	1990	3	0.08
PSYCHOSOCIAL FACTORS, CANCER, AND ISCHEMIC-HEART-DISEASE	EYSENCK, HJ	1992	16	0.08
LENGTH OF SURVIVAL AND LYMPHOCYTE PERCENTAGE IN WOMEN WITH MAMMARY- CANCER AS A FUNCTION OF PSYCHOTHERAPY	GROSSARTHMATICEK, R; EYSENCK, HJ	1989	29	0.08
COCA-COLA, CANCERS, AND CORONARIES - PERSONALITY AND STRESS AS MEDIATING FACTORS	GROSSARTHMATICEK, R; EYSENCK, HJ	1991	6	0.08
PSYCHOLOGICAL-FACTORS AS DETERMINANTS OF SUCCESS IN FOOTBALL AND BOXING - THE EFFECTS OF BEHAVIOR-THERAPY	GROSSARTHMATICEK, R; EYSENCK, HJ; RIEDER, H; RAKIC, L	1990	4	0.07
DOES SMOKING REALLY KILL ANYBODY?	EYSENCK, HJ	1995	1	0.06
IS MEDIA INFORMATION THAT SMOKING CAUSES ILLNESS A SELF-FULFILLING PROPHECY	GROSSARTHMATICEK, R; EYSENCK, HJ	1989	3	0.05

## Appendix B: Co-citation analysis

**Co-citation analysis** identifies how often two referred sources are cited in the same reference list (Mccain, 1990). The assumption underpinning the method is that the more frequent two sources appear in together, the more probable the content of the source are related. The unit of analysis in co-citation analysis is the references in the reference lists, and the method is therefore useful to identifying the underlying intellectual foundation of a body of research (Pasadeos, Phelps, & Kim, 1998).

A co-citation analysis of Eysenck's published articles, retrieved from ISI Web of Science, shows the intellectual foundation. In this case, it seems Eysenck was the basis for most of it. In total, there are 246 references that have been cited together five or more times in the corpus. Of these H J Eysenck was the first author of 120 articles. There are six clusters, cluster 1 (red) refers to early work on personality, cluster 2 (yellow), continued work on personality, with the biological basis, cluster 3( teal) on personality and neurosis, cluster 4 (blue) continued work on personality, cluster 5 (purple) personality and intelligence and cluster 6 (green) on personality, smoking, cancer and coronary heart disease.

#### Co-Citation Network Graph of H J Eysenck's published articles



**♣** VOSviewer

# Reference list

Mccain, K. W. (1990). Mapping authors in intellectual space: A technical overview. *Journal of the American Society for Information Science*, *41*(6), 433–443.

Pasadeos, Y., Phelps, J., & Kim, B. H. (1998). Disciplinary Impact of Advertising Scholars: Temporal Comparisons of Influential Authors, Works and Research Networks. *Journal of Advertising*, 27(4), 53–70. https://doi.org/10.1080/00913367.1998.10673569